

### **Remarks**

Claims 1-10 and 12-19 are pending in the application. Claim 11 has been cancelled. The subject matter of claim 11 has been clarified in amended claim 10.

### **Objections to Specification**

The Official Action includes an objection to the specification for allegedly failing to provide proper antecedent basis for the term “said display” in Claim 8. Claim 8 has been amended to depend from Claim 7. Therefore, the Applicant respectfully submits that the term “said display” has proper antecedent basis. Thus, it is requested that the objection be reconsidered and withdrawn.

### **Claim Rejections under 35 U.S.C. § 102**

Claims 1, 3-10 and 12-19 have been rejected under 35 U.S.C. §102 as allegedly being anticipated by Jones. Jones describes a programmable thermostat having a mode switch 66 with a “constant” position, a “four set” position and a “two set” position. The mode switch is set to the constant position to run a furnace at a constant temperature throughout the day. The mode switch can be set to the two set position to program the thermostat with a setback temperature for a selected part of the day and to run the furnace in accordance with the program. The four set position can be selected to program the thermostat and run the furnace in a daily cycle having two setback temperatures, *e.g.*, a daytime setback and a nighttime setback. Significantly, each of the two set and four set positions is used to both program and run the thermostat in the selected mode.

In sharp contrast, the thermostat of Claims 1, 3-10 and 12-19 has a linearly moveable member with distinct positions for setting one or more programs and running a furnace (or other temperature modifying device). Having distinct positions for setting a program and running a furnace means that the linearly moveable member is placed in the programming position to set a program and then be moved to a different position to run the furnace. As shown in Fig. 2a, the run

position for operating the thermostat is disposed at the far right of the travel path. To the left of the run position is a first programming position for setting a weekend program. To the left of the weekend programming position is a second programming position for setting a weekday program. To the far left is another programming position for setting the day and time. Thus, the positions for the linearly moveable member of this invention are distinguishable from that shown in Jones, in which the two set and four set positions are used for both programming and for running the thermostat.

Claims 1, 10 and 17 have been amended to more clearly describe those features. Specifically, Claim 1 now recites that the substantially linearly movable member has at least one position for setting at least one program within the programmable controller and a distinct position for running the temperature modifying device. Similarly, Claim 10 has been amended to recite that the substantially linearly moveable member has at least a first position for setting a program, a second position for setting a clock and a third position for running the temperature modifying device. Claim 17 now recites that the substantially linearly moveable member has more than one position for setting a plurality of programs and an additional position for running the temperature modifying device.

Jones also provides no suggestion or motivation to provide a switch with different positions for setting a program and for running the thermostat according to that program. Instead, Jones contemplates that it is sufficient to provide a mode switch having a single position for programming and for running in each mode of operation. As such, one skilled in the art would not have any motivation to modify Jones to arrive at the inventions recited in Claims 1, 10 or 17. Therefore, this invention is also non-obvious over Jones.

In light of the distinctions between Claims 1, 10, 17 and that described in Jones, it is respectfully submitted that those claims and their dependent claims are patentable thereover. Therefore, it is requested that the rejection under 35 U.S.C. §102 be reconsidered and withdrawn.

### **Claim Rejections under 35 U.S.C. § 103**

Claims 1-19 have been rejected under 35 U.S.C. §103 as allegedly being obvious in view of Uptegraph in combination with either Hyltin or Truong. In each case, Uptegraph is cited as relevant for having a rotatable switch with a run position, a set weekend program position, a set weekday program position and a set date/time position. The Official Action states that it would have been obvious to modify Uptegraph by providing a switch having such positions as a linearly moveable member in view of Hyltin or Truong, each of which show slide switches.

The Applicant respectfully submits that the rejection should be withdrawn because there is no suggestion or motivation in the references themselves, or in the general knowledge of one skilled in the art, to combine the references to arrive at the invention. The Official Action does not point to any evidence of a suggestion or motivation to combine the references. The Official Action indicates that equivalent devices of the Uptegraph rotatable switch would be apparent to those skilled in the art. The Official Action also states that the slide switches of Hyltin and Truong could be used to select options. However, neither of these statements represents evidence of a suggestion or motivation to combine the references. Instead, it is believed that the Official Action inadvertently relied on impermissible hindsight to piece together the elements of the invention using the Applicant's own disclosure as a roadmap.

The use of hindsight is tempting because, in light of the Applicant's disclosure, it may seem that incorporation of the slide switches of Hyltin or Truong would represent a simple modification to the Uptegraph device. However, a proper obviousness analysis requires the difficult but critical step

of casting the mind back to the time the invention was made. It is this requirement that guards against entry into the “tempting but forbidden zone of hindsight”. *In re Dembiczak*, 50 USPQ2d 1614, 1616-17 (Fed Cir 1999).

In *Dembiczak*, the Examiner rejected claims directed to orange garbage bags that were printed with facial indicia to make them look like decorative pumpkins as obvious over references that individually showed (1) conventional garbage bags and (2) paper bags decorated to resemble pumpkins. Noting that there was no evidence of a suggestion or motivation to combine the references, the Court of Appeals for the Federal Circuit reversed the rejection. In doing so, the Court noted that the step of casting the mind back to the time of the invention and using only the prior art and the then-accepted wisdom in the field is “especially important in the case of less technologically complex inventions, where the very ease with which an invention can be understood may prompt one ‘to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher.’” 50 USPQ2d at 1617.

The Court made clear that the “best defense against the subtle but powerful attraction of hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references.” *Id.* The evidence of a suggestion, teaching or motivation to combine references can come from a number of sources; but the range of sources available “does not diminish the requirement for actual evidence.” *Id.*

Considering this rejection, Uptegraph includes no teaching, description or suggestion to provide a linearly moveable member with distinct positions for programming the thermostat and running a furnace. Although Hyltin shows slide switches, there is no suggestion that any of the slide switches would be useful for selecting between a program mode and a running mode. The first slide switch allows a user to set a day temperature. The second slide switch allows a user to set a night

temperature. The third and fourth slide switches are used to set day and night transition times. None of the slide switches includes positions for setting programs and running a furnace. Other switches on the Hyltin thermostat include conventional switches for modes of running a furnace, including a cool/off/heat switch and a fan on/auto switch. Additional switches for inactivating the day setback on any day of the week are provided. Hyltin does not provide one of skill in the art with any suggestion that a slide switch would be useful for selecting between programming modes and a running mode.

Similarly, Truong also provides no such suggestion or motivation. Truong shows conventional slide switches 23 and 24 for selecting between emergency heat/heat/off/cool, and auto/off. Truong also shows a lever for selecting the desired temperature to be maintained. Like Hyltin, Truong fails to provide one of skill in the art with any suggestion or motivation that a slide switch would be useful for selecting between programming modes and a running mode.

Because none of the references include the suggestion or motivation necessary to combine Uptegraph with Hyltin or Truong under 35 U.S.C. § 103, one must determine if the suggestion could come from the general knowledge available to one of ordinary skill in the art. The Applicant respectfully submits that it cannot. Absent the benefit of hindsight after reading this application, the skilled artisan would have no reason to believe that there would be any advantage in replacing the rotatable switch of Uptegraph with a slide switch. At the time of Uptegraph's invention, the rotatable switch represented a new feature in the field of thermostats. As far as the Applicant is aware, never before had a thermostat included a switch with separate positions for running a furnace, programming a weekend program, programming a weekday program and setting the date and time. The internal circuitry designed to cooperate with the rotatable switch was likewise new. There is simply nothing in the general knowledge of those skilled in the art that would have

suggested the replacement of the novel Uptegraph switch with a linear slide switch having similar positions. Although conventional slide switches were known, like those shown in Hyltin and Truong, they included neither functionality for setting the thermostat into programming and running modes, nor the cooperative circuitry necessary to support that functionality. Therefore, there was nothing in the general knowledge of one skilled in the art to suggest replacing the multi-position rotatable switch of Uptegraph with a linearly moveable switch.

Because no suggestion to combine the references could be found at the time this invention was made, it is respectfully submitted that impermissible hindsight was inadvertently used in making the combination. Such use of hindsight may be difficult to resist considering the nature of the invention. If the primary difference between this invention and that shown in Uptegraph is considered to be a substantially linearly moveable member in place of a rotatable switch<sup>1</sup>, the invention may seem simple in view of the slide switches of the prior art - just like garbage bags painted like pumpkins seems simple in view of paper bags decorated like pumpkins. But also like garbage bags painted like pumpkins, the subject matter claimed in this application represents a novel and non-obvious invention.

Moreover, the Applicant respectfully points out that the Applicant is employed by the assignee of the Uptegraph patent, which was filed in 1996 – a full seven years prior to the filing of this application. The fact that it took such a long to conceive of the idea for providing a linearly moveable member having the distinct positions supports the Applicant's position that the use of a linearly moveable member was, in fact, not obvious in view of Uptegraph and the conventional slide switches. Otherwise, a linearly moveable switch with the described functionality would have been produced and marketed long ago.

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<sup>1</sup> The Applicant contends that additional significant differences between Uptegraph and the invention are also apparent.

Because the prior art does not include any suggestion or motivation to provide a linearly moveable member with distinct positions for programming and running, and because such a linearly moveable member was not within the general knowledge of the skilled artisan at the time the invention was made, it is respectfully requested that the rejection be reconsidered and withdrawn.

### **Conclusion**

For the foregoing reasons, it is respectfully requested that all of the rejections and objections set forth in the Official Action be reconsidered and withdrawn. It is believed that the application is now in condition for allowance, which action is solicited. If the Examiner believes that minor amendments or other action will advance the case, the Examiner is invited to telephone the Applicant's undersigned attorney.

Respectfully submitted,



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